

NIH Polio Symposium

Future Directions Panel

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Three critical questions

- Is wild poliovirus eradication possible?
- Can eradication be adequately confirmed such that routine vaccination can be stopped?
 - Wild poliovirus
 - Vaccine-derived poliovaccine viruses
- If the answer to either question is “no”, what is “Plan B”?”?

Is wild poliovirus eradication possible?

In theory -- yes

- No animal reservoir and no chronic carriers
- Practical demonstrations over large areas
- No wild poliovirus 2 isolates since 1999

In practice

- There is still a very long way to go
 - After 19 years and > \$10 billion, there are still 7 endemic countries with 1.4 billion people
 - In 2006, there were >400,000 infections

Can eradication be confirmed?

- Possibility of demonstrating that wild poliovirus transmission has been stopped? - questionable
 - Four endemic countries with large areas having limited health services and/or insecure areas
 - Afghanistan, Somalia, Angola, DRC
- Possibility of stopping all transmission of vaccine-derived OPV strains - nil

Conclusions

- Polio vaccination control programs will be needed for the indefinite future
- Affordable programs for the developing countries will require an inexpensive vaccine, preferably more heat-stable and antigenic than present OPV preparations
- An understanding of the clinical and epidemiological characteristics of VDPVs is critical to further decisions on vaccine policy

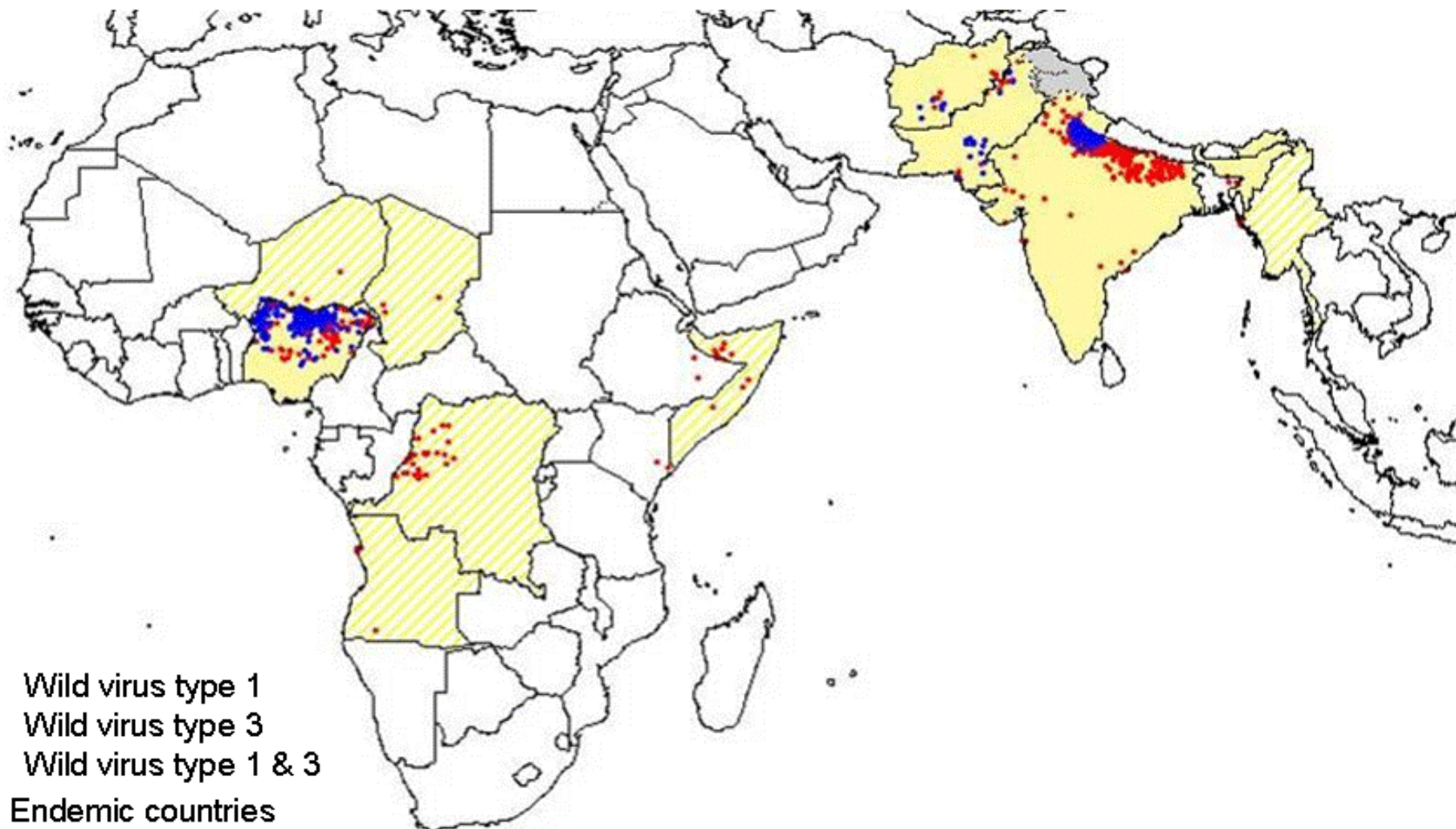
London School of Hygiene and Tropical Medicine
Lecture on 11 Sept 2007

“Polio eradication: a reconsideration of
priorities” (audio with PowerPoint)

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Available at: *John Snow Society web site*

WILD POLIOVIRUS , 20 Aug 2006 to 20 Aug 2007



- Wild virus type 1
- Wild virus type 3
- Wild virus type 1 & 3

Endemic countries

Case or outbreak following importation (0 - 6 months)

Case or outbreak following importation (6 - 12 months)

As of 01 January 2006, Egypt and Niger were reclassified as non-endemic countries.

*Excludes viruses detected from environmental surveillance and vaccine derived polio viruses.

Data in WHO HQ as of 28 Aug 2007

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Countries with polio – 2006

- No. confirmed cases (virus isolation) 2,000
No. of infections ~400,000

- Land area (population) of polio endemic countries
Seven countries* 3,814,000 mi² (1,443,831,000)
USA 48 states 3,718,000 “ (300,000,000)

* India, Pakistan, Afghanistan, Nigeria, Somalia, Angola, Dem Rep of Congo

Countries with polio –2007

(notifications to WHO – 11 Sept.)

• <u>Country</u>	<u>2007</u>	<u>2006 (YTD)</u>
– India	200	283
– Nigeria	186	803
– Pakistan	12*	17
– Afghanistan	9*	26
– <i>Dem Rep Congo</i>	<i>28*</i>	<i>7</i>
– <i>Angola</i>	<i>10*</i>	<i>1</i>
– <i>Somalia</i>	<i>8*</i>	<i>30</i>
– Other countries	<u>18</u>	<u>61</u>
– Total	471	1228

*Significant areas with limited surveillance